

REMARKS

Claims 9 and 11-18 remain pending in the present application. Claim 10 has been cancelled. Claims 9 and 17 have been amended. Basis for the amendments can be found throughout the specification, claims and drawings as originally filed.

CHANGE IN CORRESPONDENCE ADDRESS

On January 24, 2002, Applicants filed a Statement Under 37 CFR 3.73(b) which included a Power of Attorney and a Correspondence Address Change. Our returned postcard indicates that this document was received by the USPTO on February 13, 2002. Enclosed is a copy of the document and a copy of our returned postcard. Applicants request that this document be entered in this application and that the Correspondence Address be changed.

REJECTION UNDER 35 U.S.C. § 102

Claims 9-12 and 14-18 are rejected under 35 U.S.C. § 102(b) as being anticipated by Sharp (UK specification 1,382,583: figures 1-10; page 1, lines 25-49 and 68-90; page 2, lines 21-26, 48-62 and 69-71; page 3, lines 44-61 and 117-128, and page 4, line 106 to page 5, line 8).

The cited reference GB 1,382,583 (Sharp) discloses an embodiment which is designed as follows. The hold pins (the projections 27) hold metal members, and the charging with the thermoplastic resin is performed. Thereafter, the hold pins are removed or retracted, and the molten resin is forced to flow into the space caused by the removal of the hold pins. In order to suppress a skin layer (a hardened layer)

occurring around each of the hold pins during the charging with the molten resin, a contacting part of each of the hold pins is made of a material which has a lower thermal conductivity. Thereby, it is possible to form a hold-pin-related hole which is good in appearance. Specifically, the contacting part of each of the hold pins is made of a material which has a lower thermal conductivity in comparison with the amount of heat of the injected molten resin so that the transfer of heat is suppressed as much as possible and the skin layer (the hardened layer) can be reduced. It is possible to reduce the hardened layer. However, it is impossible to completely prevent the occurrence of the hardened layer.

According to another embodiment in the cited reference GB 1,382,583 (Sharp), each of the hold pins is formed as a heater, or oil flows in each of the hold pins to increase the temperature thereof. This embodiment increases the temperature of the hold pins greater than the previously-mentioned embodiment, and thereby reduces the skin layer (the hardened layer) around each of the hold pins during the charging. In the disclosed temperature control of the heater, the power supply is turned on when the die set is closed, and is turned off when the die set is opened. The use of the oil can increase the temperature of the hold pins. However, the temperature control to lower the temperature can not be easily done by use of the oil. Therefore, in the case of an insert made of metal, the holding of the insert can be done while the temperature of the hold pins is at an increased level, or the molding can be done while the temperature of the hold pins is at an increased level. In the case of an insert made of thermoplastic resin, when the temperature of the hold pins is high in the holding process, the resin

insert melts and it is difficult to implement the holding thereof. Thus, in this case, it can not be used.

Claim 9 of the present invention has been amended to define that the heating means is activated simultaneous with or after the injecting means injects the molten resin into the cavity. By delaying the activation of the heating means, the present invention is capable of positioning an insert that is made from a thermoplastic resin without having the holding pin damaging the insert due to excessive heating of the insert by the holding pin. Thus, Applicant believes Claim 9, as amended, patentably distinguishes over the art of record. Likewise, Claims 11, 12 and 14-16 which ultimately depend from Claim 9 are also believed to patentably distinguish over the art of record. Claim 10 has been cancelled. Reconsideration of the rejection is respectfully requested.

Claim 17 has been amended to define that the separating means separates the hold member from the insert after the first region is cooled sufficient to harden the molten resin in the first region and before the second region is cooled sufficient to harden the molten resin in the second region. By waiting until the first portion hardens, the hardened resin in the first portion will hold the insert while the molten resin in the second position will fill the void created by the removal of the hold member. There is nothing in Sharp which discloses this timing for the separation of the hold member from the insert. Thus, Applicant believes Claim 17, as amended, patentably distinguishes over the art of record. Likewise, Claim 18 which depends from Claim 17 is also believed to patentably distinguish over the art of record. Reconsideration of the rejection is respectfully requested.

REJECTION UNDER 35 U.S.C. § 103

Claim 13 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharp taken together with Westover (5,004,893: column 2, lines 50-68 and column 7, lines 40-59). Claim 13 depends from Claim 9. As detailed above, Claim 9 has been amended and is now believed to patentably distinguish over the art of record. Thus, Claim 13 is also believed to patentably distinguish over the art of record. Reconsideration of the rejection is respectfully requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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